The major part of the Adelaide programme was occupied by excursions, which were well patronised by the visiting members. On the day of arrival a party of fourteen left Adelaide for an excursion to Broken Hill and the smelting works at Port Pirie. On Monday morning about fifteen members departed, under the leadership of Mr. Walter Howchin, to visit places of geological interest to the south of Adelaide, chief among their objects of investigations being the remarkable evidences of glaciation discovered by Mr. Howchin. On the same day a botanical excursion to the hills in the vicinity of Adelaide, under the leadership of Prof. T. G. B. Osborn, and an anthropological excusion to Milang on the shores of Lake Alexandrina to inspect a party of aborigines there, was made under the guidance of the veteran ethnologist, Prof. E. C. Stirling, who is also the chairman of the local reception committee.

On Tuesday, August 11, a second botanical excursion by motor-car to Mannum on the Murray was made by about a dozen members, and an excursion to Roseworthy Agricultural College by about twenty-five more. Members who did not participate in other excursions were conveyed on Monday by special train to Angaston, a small town fifty-one miles from Adelaide and the centre of a very important viticultural industry, where they were entertained at luncheon by Mr. Charles Angas.

On Tuesday a large number of members were entertained to luncheon by the Adelaide branch of the Commonwealth Club. On Wednesday afternoon, August 12, overseas members departed in three special trains for Melbourne.

DR. H. J. JOHNSTON-LAVIS.

HENRY JAMES LAVIS, who was descended from a Huguenot family settled in Devonshire, and added his mother's name to his own, was born on July 19, 1856, and was unfortunately killed in a motor accident near Bourges, department of Cher, on September 10. After receiving his early education in a private school, Johnston-Lavis commenced his medical education at University College, London, and here came under the influence of Prof. John Morris, from whose teaching he acquired a passion for geological studies. Joining the Geological Society when only nineteen years of age, he had written several geological papers, one of them published in the Journal of the Geological Society, before he was twenty-one. After obtaining his degree of M.R.C.S. in London and holding some minor medical posts in this country, he proceeded in 1880 to Naples, where he established himself as a consulting physician, taking the degree of M.D. in the University of Naples in 1884, and acting as medical officer to Sir William Armstrong's works at Puzzuoli from 1892 to 1897.

It was at Naples that Johnston-Lavis found his most useful sphere of geological labour; besides keeping a diary with photographic records of the action of Vesuvius, he prepared a valuable geological map illustrating the past history of the volcano, with petrological studies of its ejected materials. Incidentally, these studies led to one of his most important memoirs, undertaken in conjunction with Prof. J. W. Gregory, in which the non-organic origin of the one-time famous *Eozoön canadense* was finally demonstrated.

In addition to his studies of Vesuvius, Johnston-Lavis did much useful work in connection with the vulcanology and seismology of the whole South Italian region. Between the years 1892 and 1897 Johnston-Lavis was in the habit of spending his summers at Harrogate, where he acted as a consulting physician. In 1895 he left Naples and, having taken a degree of M.D. at Lyons, established a practice on the Riviera at Beaulieu, while in 1909 he added to this a summer practice at Vittel in the Vosges. His scientific energies never flagged, and more than 160 papers—on volcanoes, earthquakes, mineral waters, and medical subjects— were issued by him, some of them dealing with important theoretical questions. Many geologists and others who visited the Mediterranean area were indebted to Johnston-Lavis for the friendly and valuable aid which he was always ready to afford.

NOTES.

THE death is announced, at seventy-five years of age, of Dr. A. S. Bickmore, formerly curator of the American Museum of Natural History, New York.

IN consequence of the closure of the Anglo-American Exhibition, the visit of the Geologists' Association to the science section, arranged for October 10, will not take place.

DR. HENRY OWEN, treasurer of the National Library of Wales, has been appointed a member of the Royal Commission on Ancient Monuments in Wales, in succession to the late Sir Edward Anwyl.

THE death is announced, by accidental drowning, of Dr. L. C. P. Ritchie, late president and secretary of the Royal Medical Society of Edinburgh, and the author of a number of papers on medical subjects.

ANNOUNCEMENT was made in NATURE of August 20 that, in consequence of the war the publication of the "British Pharmacopœia" had been postponed. The General Medical Council has resolved that advance copies should be made accessible to the public for inspection at the offices of the council in London, Edinburgh, and Dublin on October 1, at 10 a.m., and thereafter from 10 a.m. to 4 p.m. daily. The work will be published at the end of the year.

THE council of the Junior Institution of Engineers has elected the Marquess of Graham as president of the institution for the year 1914–15, in succession to Sir Boverton Redwood, Bart. The Vickers prize, consisting of a gold medal and premium of instruments or books, has been awarded to Mr. James Richardson, for his paper on high-power Diesel engines: their

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development for marine service. Mr. Richardson has also been awarded the institution medal for the same paper.

THE Board of Trade has arranged for a Commission consisting of representatives of the Board of Trade, the Timber Trade Federation of the United Kingdom, and the Mining Association of Great Britain, to proceed to Canada and Newfoundland in order to inquire into the possibility of opening up new sources of supplies of mining timber for use in the coal mines of Great Britain. Inquiries on the subject should be addressed to Mr. C. F. Rey, Board of Trade, Queen Anne's Chambers, Westminster.

THE death is reported of Dr. W. L. Dudley, a prominent American chemist. He was born in Kentucky in 1859, and was professor of chemistry and toxicology at Miami Medical College, Ohio, from 1880 to 1886. In the latter year he was appointed to the chair of chemistry in Vanderbilt University, where in 1895 he became dean of the medical department also. He was secretary to the inorganic chemistry section of the St. Louis Congress in 1904, and U.S. Commissioner to the London Congress of Applied Chemistry in 1909. Dr. Dudley had devised an important process for working and electroplating with iridium.

THE war is likely to lead to some readjustment of the trade of the world. The Decimal Association points out in a letter we have received that if British manufacturers are to secure any of the trade which Germany has hitherto carried on with neutral countries, they must be prepared to adopt metric measures of weight, and so on. The association will be glad to help manufacturers and merchants who need assistance, and, if there is a demand, to arrange lectures under the auspices of chambers of commerce during the coming winter. Communications should be addressed to the secretary of the association at Finsbury Court, Finsbury Pavement, London, E.C.

THE death occurred, on September 20, of Mr. William Ascroft, of Cheyne Walk, Chelsea, in his eighty-second year. Mr. Ascroft was responsible for the six beautiful crayon sketches of twilight effects published by the Royal Society in the report on the eruption of Krakatoa in August, 1883. In the November following, the extraordinary twilight glows in the British Isles commanded general attention, and their probable connection with the Krakatoa outburst was pointed out. Mr. Ascroft made his drawings on the bank of the Thames, a little west of London, on the evening of November 26, 1883. They represented the grand general colouring of the western sky from shortly after sunset (3h. 57m. p.m.) to the final dying out of the afterglow at about 5.15 p.m.

IN the September issue of *Man*, Mr. W. N. Beaver discusses the eating of human flesh in the western division of Papua. A long experience of almost every district of British Papua inclines him to believe that while ritual or ceremonial does in many cases form the prime reason for cannibalism, in by far the greater number of cases human flesh is eaten because it is a food and is liked. The practice, however, is not habitual, but sporadic. It is said that snake-eaters are always cannibals. This is not a certain fact in Papua, but it is certainly a coincidence that the majority of snake-eating tribes in the island are also cannibal.

IN *Man* for September Mr. J. P. Johnson describes a collection of pygmy implements from Western Australia in the Perth Museum, and others from Eastern Australia in the Sydney Museum. Like those from South Africa, he regards them as merely diminutive forms or varieties of what French archæologists term the Audi, Chatelperron, and Gravette *pointes* or *couteaux*. These are characteristic of the Aurignaco-Magdalenien specimens of north-western Europe where the crescent is absent, and are prominent in the Capsian specimen of Sicily where the crescent is present. In Australia, however, they do not appear to be associated with scrapers as in Europe and South Africa.

ABOUT 1830 some Chinese and Malay convicts confined in the jail at Mahableshwar, the chief hill station of the Bombay Presidency, are supposed to have introduced the cultivation of the strawberry, which has now become a flourishing industry. The attempt to introduce plants from Saharanpur failed, and the present stock was obtained from Bangalore, where its previous history is unknown. Though they are good and command a ready sale, the berries are capable of much improvement. Dr. W. Burns, economic botanist to the Government of Bombay, who gives a valuable account of the industry in vol. ix., part iii., of the official Agricultural Journal of India, believes that if new stock can be introduced from Europe and America, there is hope of the production of high-class fruit in large quantities in the Yenna Valley.

IT is satisfactory to observe that many field clubs and local natural history societies are devoting attention to the preparation of a flora of the districts in which they operate. The Leicester Literary and Philosophical Society, in its Transactions, vol. xviii., for 1914, recently published, describes the work that is being carried on by their initiative. Many important discoveries, such as *Ceratophyllum submersum*, *Rumex pulcher*, besides cryptogams, have been made. Negotiations with the Uppingham and Rutland Natural History Societies have resulted in an arrangement to include Rutland in the Leicestershire work. So far as the original survey on ecological lines is concerned, the general editor has now defined the main lines of vegetation, and has recorded them on the 6-in. maps. An appeal for assistance from local workers has met with active support.

IN the notice of the recovery of the type specimen of *Pliolophus vulpiceps* in our issue of September 17 it should have been stated that Messrs. Flower and Garson (Cat. Osteol. Mus., R. Coll. Surgeons, part ii., p. 380, 1884) were the first to suggest the identity of Pliolophus with Hyracotherium.

ACCORDING to an article contributed to a Maltese journal of July 23 by Mr. G. Despott, of the Natural History Museum, Malta, the cetacean alluded to in

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NATURE of August 13 (p. 620) as having been stranded at Birzebbugia on July 20, is undoubtedly, as suggested in that note, a blackfish (*Globicephala melaena*). The identification is confirmed by photographs forwarded by Mr. Despott, who states that this specimen is the first record of the species in the Mediterranean.

FROM the report for 1913, contained in vol. iv., No. 8, of its journal, we learn that the East Africa and Uganda Natural History Society continues to maintain its record of progress and prosperity, the number of new members being greater than in any previous year. His Excellency Sir H. C. Belfield has been pleased to collect a fund which is to go towards the establishment of a permanent museum, with a curator, and a plot of ground in a central position in Nairobi has been reserved as a site for the proposed new buildings. A feature of the aforesaid number of the society's journal is a coloured plate of the African brown-bellied kingfisher (*Halcyon semicoeruleus*), illustrating an article on this strikingly coloured species by Dr. V. G. L. van Someren.

IN concluding his article on pattern-development in mammals and birds in the September issue of the *American Naturalist*, Dr. G. M. Allen discusses partial albinism in wild birds, and what is termed "centrifugal coloration" in both groups. In the former section it is suggested that the white eyebrow-stripe in the so-called ringed guillemot—now known to be a special phase of the ordinary *Uria troile*—represents an incipient albinism forming a line of demarcation between the dark ear-patches and crown-patches. The author would expect to find this white in young birds, and suggests that, if of a recessive nature, it may eventually be developed in a much larger number of members of the species than is at present the case. As regards centrifugal coloration, this is the development of black pigment at the extremities or points of the body, as exemplified by the black nose and tail-tip not infrequently seen in domesticated cats. The so-called Himalayan rabbits, in which the whole animal is white, with the exception of the black nose, ear-tips, and toes, form another striking example. The paper winds up with a summary of the author's views.

IN connection with the military operations of our Japanese allies in the province of Shantung, the meteorological observations made in Korea, on the opposite shores of the Yellow Sea, for about ten years, are of especial interest. We have recently received the results for the year 1912, and for the lustrum 1906–10. The following extracts from these valuable data, refer to stations in the north-west and south-west of Korea for the lustrum in question. *Chemulpo*: Highest mean monthly maximum temperature (August), 82·8°; lowest mean monthly minimum (February), 19·6°; annual rainfall, 31 in., on ninety-seven days; sunshine, 2726 hours (61 per cent. of possible amount). *Mokpo*: Temperature as above, 86·4° (August); 27·9° (February); rainfall, 38·3 in., on 126 days; approximate sunshine, 2310 hours (52 per cent. of possible amount). The instruments and method of observation are of the same excellent character as those at meteorological stations in Japan, and the tables are carefully prepared by Mr. Y. Wada, director of the observatory at Chemulpo.

WE are glad to see from *Symons's Meteorological Magazine* for September that Dr. Mill is able to resume the editorship after an interval of nearly a year. The size of the magazine has had to be somewhat reduced, owing to the fall in the income of the British Rainfall Organisation through the war. This number contains an interesting article by Mr. H. H. Clayton and Mr. W. M. Hays, entitled "Arguments for Basal and Immediate Crop Estimates," the gist of which is the possibility of substituting for present estimates of crop conditions, based on reports by growers and bureau agents, opinions based on climatic records supplied by a World Meteorological Organisation from daily weather telegrams. The publication by the U.S. Weather Bureau of daily weather charts for the northern hemisphere, and the collection and publication of data from stations to represent the meteorology of the globe, by the efforts of the Solar Commission of the International Meteorological Committee and of the Meteorological Office, are great steps in the above direction. But, as we have before had occasion to point out, the proposals made to the meteorological conferences and meetings to promote the establishment of an international weather bureau have not met with any definite encouragement.

IN the Bulletin of the American Mathematical Society, vol. xx., p. 10 (July), Prof. Edward Kasner discusses certain exceptions to the general rule according to which the ratio of the arc to the chord of a curve tends to the limit unity. In the case of an ordinary singular point the ratio may, of course, be indeterminate, but the author finds that in the case of certain imaginary curves the ratio may have a definite limit different from unity at some particular point or points, even if the curve be analytic in the neighbourhood of the point or points in question. The most typical case is that of a plane curve at a point where the tangent passes through one of the imaginary circular points at infinity. At such a point the ratio of chord to arc becomes $\frac{2}{3}\sqrt{2}$, $\frac{2}{4}\sqrt{3}$, $\frac{2}{5}\sqrt{4}$, and so on according to the order of contact with this particular tangent. The discrepancies are due to the fact that the elements of chord and arc from the point to a neighbouring point both vanish to the first order of small quantities.

IN the Proceedings of the Physical Society for August (vol. xxvi., part 5) Dr. Lees discusses the connection betwen Fourier's series and the method of least squares. This connection was pointed out in Tait's "Natural Philosophy" without proof, and we believe that several other writers have dealt with the question in greater or lesser detail, possibly covering the same ground. The present paper contains a brief proof of the proposition that if it is required to obtain a finite trigonometric series having given values for a corresponding finite number of values of the argument, the series obtained by the Fourier expansion makes the sum of the squares of the errors a minimum.

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IT was in 1871 that Lord Rayleigh first proposed a theory to account for the scattering of light by small particles, and in particular to explain the blue sky. Various other papers have followed on the subject by different writers. In the *Bulletin de l'Académie des Sciences de Cracovie,* Dr. Ladislas Natanson, in a paper communicated last January, discusses the problem on lines consistent with the modern electron theories. The author first considers the effect of a vibrating electron in the presence of a train of electromagnetic waves, using Planck's formula. An expression is found for the energy of the scattered wave; this is found to vanish in the direction of propagation and to be a maximum in the equatorial plane. The electric and magnetic energies are not in general equal. When it is sought to deal with a medium containing a large number of such vibrators the problem cannot be solved without making certain assumptions which can only be regarded as a first approximation. With these the author obtains formulæ for the coefficient of transmission of the medium and its dependence on the wave-length.

THE scientific study of the acoustical properties of public buildings is a subject the neglect of which may involve losses of thousands of pounds. The large hall presented to the University College of North Wales by Sir John Prichard-Jones possesses an echo quite equalling the famous one of the baptistery at Pisa, but this feature renders it useless for many purposes for which it would otherwise be in requisition. Mr. F. R. Watson's article on the acoustics of auditoriums in the University of Illinois Bulletin xi., 29 (Bulletin No. 7, Engineering Experiment Station; London: Chapman and Hall, 1914, price 20 cents) is a welcome contribution to this study. The investigation refers primarily to the auditorium of the Illinois University, which has formed the subject of the author's researches since 1908, one year having been spent by him in general study abroad. Mr. Watson discusses Sabine's formulæ for the effect of absorption on reverberation, and arrives at the following general inferences:—Wires have but little effect; air currents due to ventilation may even be worse than useless. In his survey of the building in question he has determined both experimentally and theoretically the paths of the sound waves reflected from the various surfaces, plane and curved, of the building, and the formation of foci; and a remedy has been proposed involving the placing of curtains in positions determined from these observations. The sources of sound employed in these experiments include a ticking watch, an alternating arc current in presence of a concave mirror, and a directed source ingeniously obtained with the aid of a metronome. But the Illinois auditorium with its concave walls and curved roofs is so different from the rectangular Prichard-Jones Hall at Bangor, that an investigation which is sufficient for one building will scarcely be likely to explain, except very partially, the defects of the other.

IT is remarkable that no extended use has ever been made of a phonographic attachment to a telephone for recording spoken messages. The Poulsen telegraphone in which the received currents produced a record by magnetising a steel wire or tape was undoubtedly a scientific success, and perfect speech reproduction could be obtained by its means, but it never made a position for itself as a commercial instrument. The reason for this may have been that the telegraphone had to be electrically connected to the line, and there were possibly some technical or administrative objections to such an addition to a subscriber's instrument. From an article in the *Scientific American* it appears that a new Edison instrument, called the "telescribe," has recently been evolved in which the arrangements are more akin to the Edison wax phonograph. The ordinary telephone receiver of the subscriber's instrument is placed against a very sensitive transmitter, in a local circuit with a battery and another "special" telephone receiver, and the latter is arranged to emit its sound waves against the ordinary sound-recording diaphragm of a phonograph. The instruments of this local circuit must apparently be designed so as to act as a telephone relay and increase the amplitude of the vibrations sufficiently to cut the wax phonograph cylinder. A second receiver on the subscriber's set enables him to listen to the message, and even to contribute his share of the conversation, so that the whole or part of it may be recorded as he desires. This is certainly an ideal arrangement if it gives satisfactory records without impairing the clearness of the articulation by the relaying process.

THE value of the scientific exploration of the agricultural products of India is well illustrated in a paper by Mr. C. Somers Taylor, agricultural chemist to the Government of the province of Behar and Orissa, contributed to vol. ix., part iii., of the official Agricultural Journal of India. Discussing the problem of the varying amount of sugar obtainable from cane juice, he remarks that at one time this was thought to be dependent on the presence of glucose. This theory has now been proved to be unsound by the great Dutch sugar chemist, Geerligs. On the other hand, the same authority—and his conclusions are verified by Indian research—shows that a high percentage of potash is, as a rule, accompanied by a low quotient of purity, a low saccharine content, and a high glucose content when the cane is ripe. The question of potash content is carefully examined by Mr. Somers Taylor in this paper, and he concludes that work on the potash content of cane juice is likely to be of great value in the examination of different varieties of canes, and in consequence the official chemists propose to take up this study more fully in the near future.

THE Institute of Chemistry has issued a "History of the Institute, 1877–1914," compiled, by direction of the council, by Mr. Richard B. Pilcher, the registrar and secretary. The institute had its origin in a meeting held on April 27, 1876, to discuss the necessity for organisation among chemists for the purpose of enhancing their professional status; at this meeting Prof. (later Sir) Frederick Abel presided. A committee was appointed to confer with the Chemical Society with regard to a scheme for establishing an organisation of professional chemists, and ultimately

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it was decided to form a new association, and the first officers of the council, with Prof. Frankland as president, were elected in 1877. The membership, which in February, 1878, was 225, had grown in March, 1914, to 1454. Recently new buildings have been erected, duly equipped, and suitable for the purposes of the institute, at a cost of 17,080*l*. Owing to the dispute in the building trades in the early part of this year, these new buildings have not been completed, so that the institute will occupy their present premises at 30 Bloomsbury Square, if necessary until Christmas. A special council meeting was held on June 12 to consider the question of bringing the work of the institute more prominently before the public. Four lectures will be given during the winter months.

OUR ASTRONOMICAL COLUMN.

COMET 1913*f* (DELAVAN).—Delavan's comet is becoming a less favourable object for evening observation owing to the diminution of its declination and its movement westward among the stars. It attains, however, a considerable altitude in the hours just before dawn, and this is the best time for observation. It is situated not far from the star χ Ursæ Majoris, and is approaching α Can. Venaticorum. On clear evenings it is a conspicuous object near the northern horizon and its tail has increased considerably in length. The series of fine nights recently experienced has given opportunities for a considerable amount of observation.

THE RECENT SOLAR ECLIPSE.—The recent eclipse was observed at Paris and Algiers, though at both stations it was only partial. At the Observatory of Paris MM. Bigourdan, Boquet, Chatelu, and Le Morvan made the observations, while M. Gounessiat worked under good conditions at Algiers. The results of these observations have been communicated to the *Comptes rendus*, August 24 and 31. In the case of Paris, M. Bigourdan determined the observed minus calculated times of commencement and end as -23 sec. and -38 sec. respectively. M. Gounessiat, from his observations at Algiers, gives the corrections to his observed times of first and last contact as -25 sec. and -38 sec. respectively.

FRENCH PROVINCIAL OBSERVATORIES IN 1913.—The pamphlet published by the French Minister of Public Instruction and Fine Arts, entitled "Enquêtes et Documents relatifs à d'enseignement supérieur," vol. cix., contains the reports of the French provincial observatories for the year 1913. The observatories dealt with are Algiers, Besançon, Bordeaux, Lyons, Marseilles, Nice, Pic du Midi, and Toulouse. The volume gives a good idea of the various branches of astronomical and meteorological work, which forms the main routine work of the several institutions, besides stating the actual progress made during the past year. It gives further lists of the various staffs, showing that each observatory employs from six to nine scientific members, excluding the Pic du Midi, which is composed of four.

STRONG MAGNETIC FIELDS FOR SOLAR RESEARCH.—MM. Deslandres and Perot present, in the *Comptes rendus* for August 24 (vol clix., No. 8), the second of their series of experiments for the production of most intense magnetic fields. This work is particularly important in its bearing on experiments relative to researches on solar magnetic fields. It is pointed out that the progress of advance in the construction of electromagnets is to be found, not in the saturation of large masses of iron, but in the judicious use of intense electric currents. The authors of the above paper do not therefore advocate the exceedingly ponderous apparatus of Weiss, which weighs about 100 tons, but are directing their attention to comparatively small and light electromagnets. In the present paper they describe somewhat in detail the methods they adopt and the success already achieved speaks well for further advance. With the support of the Princess of Polignac, the electric supply company of Paris, and the electric station of the Bon Marché, they have been able to test their new method of water cooling of the magnetising coils, and have without the use of iron reached a field of 50,000 gauss as measured by its effect on one of the zinc lines. They use thin silver tape instead of wire in their coils, and cool it by a stream of water flowing across instead of along the tape. The difference of potential between two consecutive turns of the tape is kept below 1·4 volts in order to minimise electrolysis. By the use of iron cores the authors hope to be able eventually to reach fields of 150,000 gauss, but their work has been interrupted by the war.

RECENT ECONOMIC ZOOLOGY.

THE University of California has recently issued (Publications in Zoology, vol. xi., No. 14, 1914) a monumental paper on economic ornithology by Mr. H. C. Bryant; although a single species only—the Western Meadow-lark (*Sturnella neglecta*)—is dealt with, the memoir extends to 133 pages, with four plates and many statistical tables. All modes of investigation—field work, experiments with captive birds, examination of stomach contents of adults throughout the year and of nestlings, summaries of the influence of season, locality, age and sex, on the nature of the food—have been brought to bear on the problem. The farmers of California, in reply to circulars sent out by the author, were about equally divided in opinion as to whether this particular bird is harmful or not. Mr. Bryant comes to the conclusion that except for a reprehensible habit of destroying sprouting grain in spring, the Western Meadow-lark must be regarded as beneficial from the numbers of harmful insects and weed-seeds that it devours. In addition to the economic interest of this paper, a discussion of the value of "protective" adaptations in insects appeals to the naturalist. A large proportion of the stomachs examined contained hairy caterpillars, ants, wasps, and bees, as well as "cryptically" coloured grasshoppers and weevils. The author admits, however, that the factors of situation and motion at the time of capture might explain why the form and hue of these latter failed to protect them.

The last published part of the Bulletin of Entomological Research (vol. v., part 1, April, 1914) contains an interesting account of the Gold Coast by Dr. J. J. Simpson, who has paid special attention to tsetse-flies and other blood-sucking insects. Mr. W. W. Froggatt has a short but valuable note on sheep-maggot flies in Australia, where species of bluebottle (Calliphora) have, during the last ten years, acquired the habit of "blowing" healthy sheep, as the greenbottle, *Lucilia sericata*, has long done in this country. A minute chalcid parasite does something to keep the flies in check, but they are said to have caused the loss of a million pounds to stockowners last year in New South Wales alone. *Glossina morsitans* in Nyasaland is discussed by Dr. J. O. Shircore, who has traced the fly to four "primary centres," where extermination might be attempted with some chance of success.

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